

REMARKS

The subject continuation application is identical to the originally filed parent, except that it includes the amendment to the specification that had been entered in the parent application (and so clearly contains no new matter) and claims that differ from those originally presented in the parent application. Favorable consideration of the claims as presented herein is respectfully requested.

U.S. patent 5,819,672 to Radway et al. had been cited in the prosecution of the parent application. Pending claims 1-15 in the subject application define patentably over the Radway et al. patent. Claim 1 calls for a method for inhibiting accumulation of reflective ash on surfaces in a furnace in which calcium-containing coal is burned. The method comprises (a) adding to the coal enough of a fluxing agent-free composition comprising an iron compound to produce treated coal that is free of added fluxing agent and contains an effective amount of the iron compound; and (b) burning the treated coal, forming calcium ferrite. This method differs from that disclosed by Radway et al.

The method of the Radway et al. patent, as described in the patent's specification, defined in the patent's claims and illustrated in the patent's working examples, is the standard prior art technique over which the present invention provides an improvement—it is the coating of furnace wall ash with a darkening agent. For example, the Radway et al. Abstract states, “The method involves exposing the walls to a darkening agent, or a combination of a darkening agent and a fluxing agent.” And, again, in the Field of the Invention, Radway et al. state that “the invention relates to a darkening agent for darkening highly reflective deposits of thin ash . . .” And, again, in the Summary of the Invention, Radway et al. state, “The method involves exposing the walls to a darkening agent, or a combination of a darkening agent and a fluxing agent.”

By contrast, the method of the present invention does not involve exposing the walls to a darkening agent or darkening reflective deposits of ash, but (as defined in the subject claims) inhibiting accumulation of ash on the wall—it inhibits the formation and deposition of such ash on the furnace walls in the first place. The present invention inhibits the formation and deposition of such ash by, as specified by the claims, forming calcium ferrite. Nothing in the Radway et al. patent teaches or suggests inhibition of the formation or deposition of such ash or

teaches or suggests formation of calcium ferrite. The Radway et al. patent is directed consistently and single-mindedly to coating reflective ash build-up with a darkening agent.

Nor do Radway et al. provide any hint as to how to carry out its method (e.g., with respect to concentrations, type of iron ore, and techniques), let alone the claimed method, when the darkening agent (and, optionally, the fluxing agent) is added to the coal itself, as required by the subject claims. Indeed, the Radway et al. patent mentions merely in passing that iron oxide can be used in coal without a fluxing agent. And, still, it is clear that Radway et al. do not inhibit ash build-up, but stick the darkening agent to the ash, whether or not the fluxing agent is employed:

In some applications, the darkening agent alone, may be all that is needed to bind to the reflective deposits and, thereby, enhance heat absorption. In other applications, a fluxing agent may be needed to promote sticking of the darkening agent to the relevant surfaces. Radway et al., col. 3, lines 29-33.

In fact, Radway et al. always pre-supposed the pre-existence of the ash coating:

Preferably, the darkening agent or mix is blown into the furnace near the part of the boiler wall that is coated with the reflective ash. Radway et al., col. 3, lines 65-67.

Thus, it is clear that Radway et al. is directed solely to coating ash deposits and not to formation of calcium ferrite or inhibiting deposition of ash, regardless of whether or not a fluxing agent is used or the darkening agent is added to the coal or not. Radway et al. simply did not appreciate that if iron oxide were added to the coal in the proper amount, it would form calcium ferrite upon combustion of the coal, thereby obviating the need to coat white ash as it directs, and nothing in the Radway et al. patent so teaches or suggests. This surprising result is sufficient to establish patentability.

In view of the foregoing, favorable consideration and early allowance of claims 1-15 are earnestly solicited.

CONCLUSION

Favorable consideration and early allowance of the subject application are earnestly solicited.

Respectfully submitted,

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By:

A handwritten signature in black ink, appearing to read 'KS', is written over a horizontal line.

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